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# Technology seen as tool to improve public health decisions

## Center for Homeland Defense and Security

Naval Postgraduate School, Monterey, California

# Technology seen as tool to improve public health decisions



**Download the paper:** "Paper: Biodefense Medical Countermeasure Readiness"

Wendy Rude believes technology is one tool that could help public health practitioners be better prepared to make speedier decisions in response to biological incidents. The challenge, Rude says, is getting public health leaders to embrace a new way of thinking geared toward strategy.

Rude's course paper in Technology for Homeland Security examined ways to utilize technology to make quicker decisions and distribute resources, such as vaccine, to where they are most needed.

"My paper is wrapped around what we could do differently with technology for decision making for a novel disease, and how the processes can also apply to strengthen health care first responders as civil force protection, as well as impact routine disease containment," said Rude, who is the Immunization and Provider Outreach, Immunization Tribal Liaison with the Washington State Department of Health.

The paper was intended as a strategy for "Biodefense Medical Countermeasure Readiness." Rude is expanding the concepts from this paper in her thesis, titled "Developing a U.S. Medical Intelligence Framework to Support Biodefense."

1) Rude's course paper outlined decision-making factors that would help public health professionals answer "what-if" scenarios that would better enable them to anticipate incident responses.

"Technology can assist us to process data collection from pieces of information to strategic medical intelligence," Rude said.

She crafted flowcharts outlining data run via technology to become developed into strategic medical intelligence as countermeasures supporting prevention efforts that could be used by decision-makers and first responders in setting forth disease defense activities.

"Medical intelligence is a key element in producing the necessary biological threat assessment," Rude wrote.

2) Her research changed the way Rude views homeland security preparedness. She suggests public health leaders look beyond traditional reactionary measures in planning for and fighting biological incidents. As she wrote her paper, the swine and bird flu outbreaks were garnering the attention of the public as well as public health professionals. In Rude's view, the traditional procedures for fighting these outbreaks and for distributing vaccine were inefficient and wasteful.

Vaccine distribution in Washington state was based on geography and where the greatest population resided, whereas Rude believes that the kind of potential civil medical intelligence outlined in her paper would enable more efficient decisions by targeting priority populations. The potential result would be less waste of vaccine, Rude noted, pointing out that Washington state is now grappling with how to dispose of unused vaccine. Various issues impact public health decision making and communication processes, including vaccine production, distribution timelines, provider and individual vaccine safety hesitancy. Access to information before and during the event certainly impacts the effectiveness of all response and countermeasure planning and implementation.

3) As Rude completes her thesis, she is frustrated by the public health establishment's reluctance to consider new and novel approaches, such as outlined in her writings.

“The public health environment is so steeped in performing historical processes, that the culture of being unwilling to try anything that has not been done before is a challenge,” she said. “I’m trying to find new ways to find a voice for people who are interested in thinking differently.

“Traditional response approaches are still needed, yet in addition, emphasis is needed on strategic, pre-incident medical countermeasure planning. A new approach in the public health and civil response area needs to be incorporated into current methodologies. Failure to do so leaves us exposed and vulnerable to potential bioterrorism.”

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Associated file: Paper: Biodefense Medical Countermeasure Readiness